## PATENT CLAIMS

1.      A method for the monitoring of a manufacturing process of a plurality of physical objects,

in which an analysis is performed by using values of at least one process parameter of the manufacturing process of the physical object;

in which, as a result of the analysis, when they satisfy a prescribed selection criterion, physical objects are marked in such a way that the associated physical objects can be taken as a random sample for the monitoring of the manufacturing process.

2.      The method as claimed in claim 1, in which the physical object is a wafer.

3.      The method as claimed in claim 1 or 2, in which the analysis is a statistical analysis.

4.      The method as claimed in one of claims 1 to 3, in which the values of the at least one process parameter are measured when the physical object is being manufactured.

5.      The method as claimed in one of claims 1 to 4, in which the physical objects of the random sample are subjected to a quality checking measurement for checking the quality of the respective physical object.

6.      The method as claimed in claim 5, in which, for ascertaining the variation of the qualities of the physical objects, a physical object for which the value of the at least one process parameter has a prescribed difference from the random sample is additionally subjected to a quality checking measurement.

7.    The method as claimed in claim 1 or 6, in which the statistical analysis comprises the ascertainment of the median of the values of the at least one process parameter.

8.    The method as claimed in claim 1 or 7, in which the statistical analysis comprises the ascertainment of the arithmetic mean value of the values of the at least one process parameter.

9.    A device for the monitoring of a manufacturing process of a plurality of physical objects with a processor which is set up in such a way that the following method steps can be carried out:

performance of an analysis by using values of at least one process parameter of the manufacturing process of the physical object;

marking of physical objects when, as a result of the analysis, a prescribed selection criterion is satisfied, so that the associated physical objects can be taken as a random sample.

10.    A computer-readable storage medium, in which a program for the monitoring of a manufacturing process of a plurality of physical objects is stored, which program has the following method steps when it is run by a processor:

performance of an analysis by using values of at least one process parameter of the manufacturing process of the physical object;

marking of physical objects when, as a result of the analysis, a prescribed selection criterion is satisfied, so that the associated physical objects can be taken as a random sample.

11.    A computer program element for the monitoring of a manufacturing process of a plurality of physical objects, which has the following method steps when it is run by a processor:

performance of an analysis by using values of at least one process parameter of the manufacturing process of the physical object;

marking of physical objects when, as a result of the analysis, a prescribed selection criterion is satisfied, so that the associated physical objects can be taken as a random sample.